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STC Conference

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This briefing, on the Global Command and Control System (GCCS) presented at the STC Conference on 22 April 1998, describes the background, describes GCCS Users, GCCS functional capabilities, and supporting software technology in the context of the Joint System for Command and Control. It describes GCCS software in terms of the requirements process, the GCCS applications, and system architecture concluding with a look ahead to GCCS in the future.

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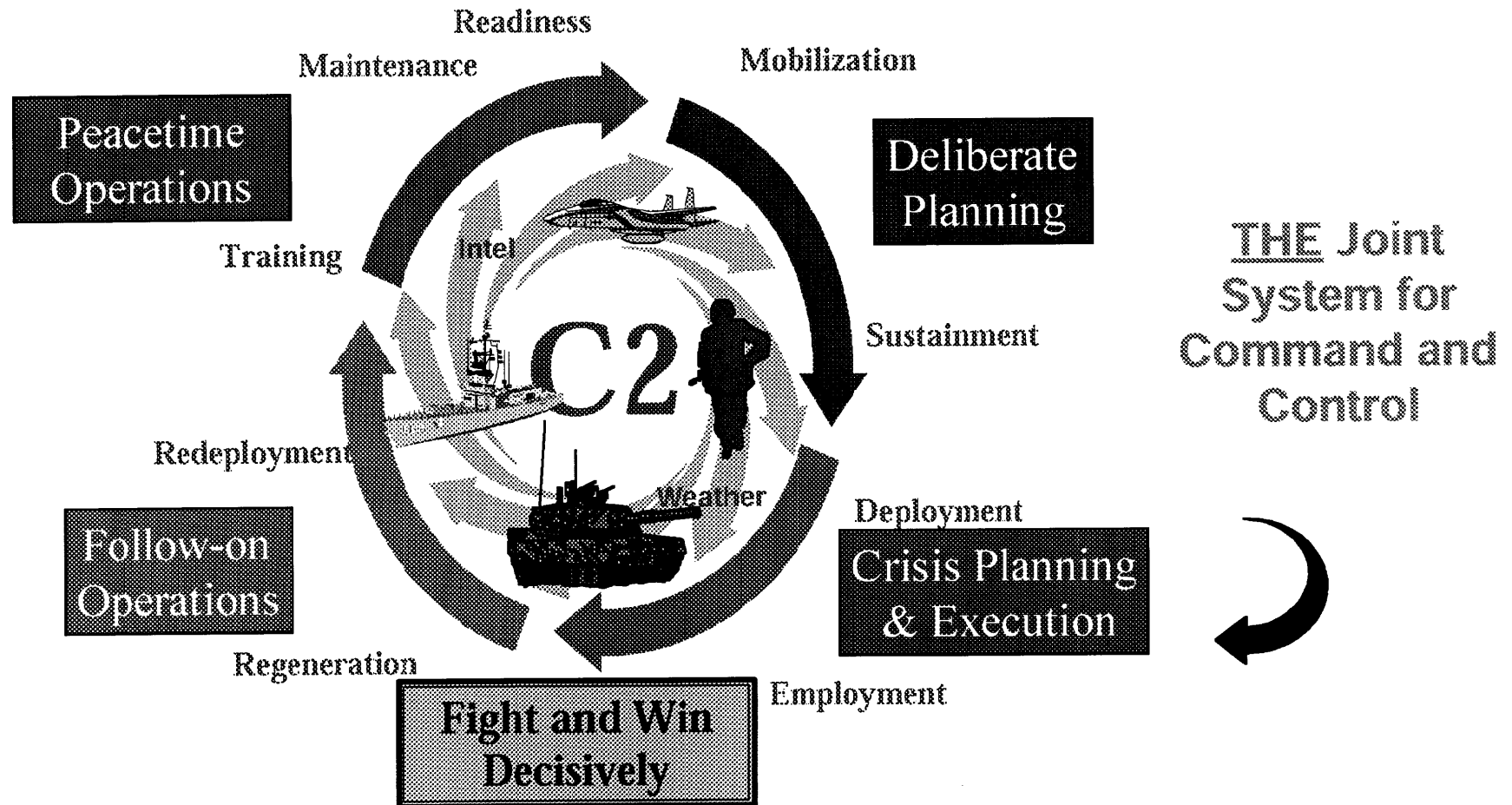| 17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT Unlimited

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- **Background**

- **GCCS Users**

- **Functional Capabilities**

- **Software Technology**

Command & Control Cycle

Readiness

Maintenance   Mobilization

Peacetime
Operations

Training   Deliberate
                  Planning

          Intel

          C2   THE Joint
                      System for
          Sustainment Command and
                      Control

Redeployment

Follow-on
Operations   Weather

          Deployment

          Crisis Planning
          & Execution

Regeneration

Employment

Fight and Win
Decisively

Global Transportation Network

Operations Support Sys

Command Theater Information Sys

Theater Automated C2 Information Sys

Crisis Management ADP Sys

USEUCOM Command Centers Sys

Contingency Theater Automated Planning Sys

Theater C2 System

- **Duplication of Effort**
- **Not Interoperable**

o WWMCCS Sites

▲ CINC/Service Systems

- Commanders
- Command Centers
- Planners
- Tactical Execution
- Intelligence Analysts
- Transportation

DII Bringing Enterprieses Together

Commanders Require a Fused View of the Battlespace

- Displayed on large screen display
- Integrated/correlated information
- Operations, Intelligence, Combat Support
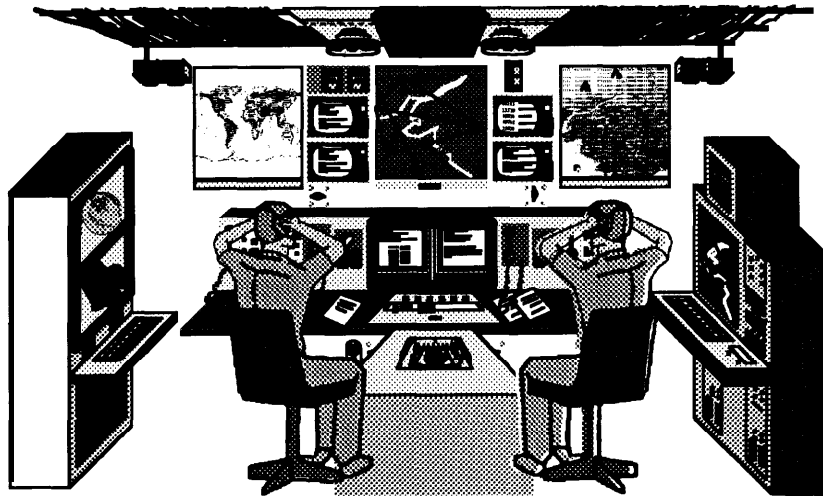
A Multitude of Windows but no clear view of the world

A Single Integrated view of the world

Information Integration Problem

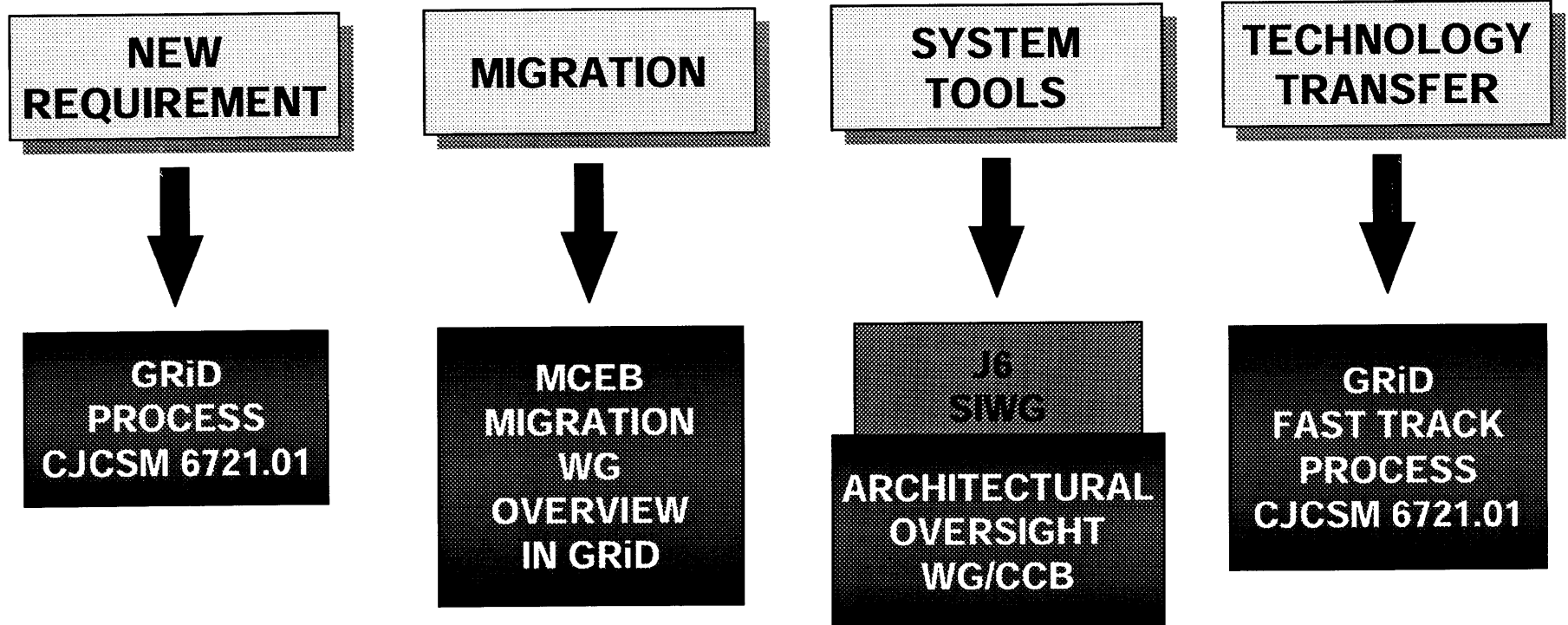DII Bringing Enterprieses Together

Exercise/Operations Support

- GCCS involved in many activities & operational contingencies
  - CENTCOM AOR
  - Bosnia
  - Ulchi Focus Lens
  - Unified Endeavor
  - Vigilant Guardian '98
  - Showdown with IRAQ
- Combined interoperability with theater systems
  - Coalition allies and combined exercises
    (NORAD, Saudi Arabia)
- Foreign Military Sales to allies
  - Saudi Arabia, Japan, Canada, New Zealand, Australia
- Releasability of data, hardware and software
    Using C2 Guard and Radiant Mercury for data
  - Must follow appropriate technology transfer policy for hardware and software

Software Requirements Process

NEW REQUIREMENT	MIGRATION	SYSTEM TOOLS	TECHNOLOGY TRANSFER
↓	↓	↓	↓
GRiD PROCESS CJCSM 6721.01	MCEB MIGRATION WG OVERVIEW IN GRiD	J6 SIWG / ARCHITECTURAL OVERSIGHT WG/CCB	GRiD FAST TRACK PROCESS CJCSM 6721.01

DII Bringing Enterprieses Together

Functional Capabilities

—NEWS GROUP

—GLOBAL STATUS OF RESOURCES AND TRAINING

—SENSITIVE RECON SCHEDULING

—DELIBERATE PLANNING

—CRISIS ACTION PLANNING & EXECUTION

—COMMON OPERATIONAL PICTURE

—INTELLIGENCE SUPPORT

—AIR TASKING ORDER READ CAPABILITY

—SECRET WEB (E-MAIL, HOME PAGES, ETC)

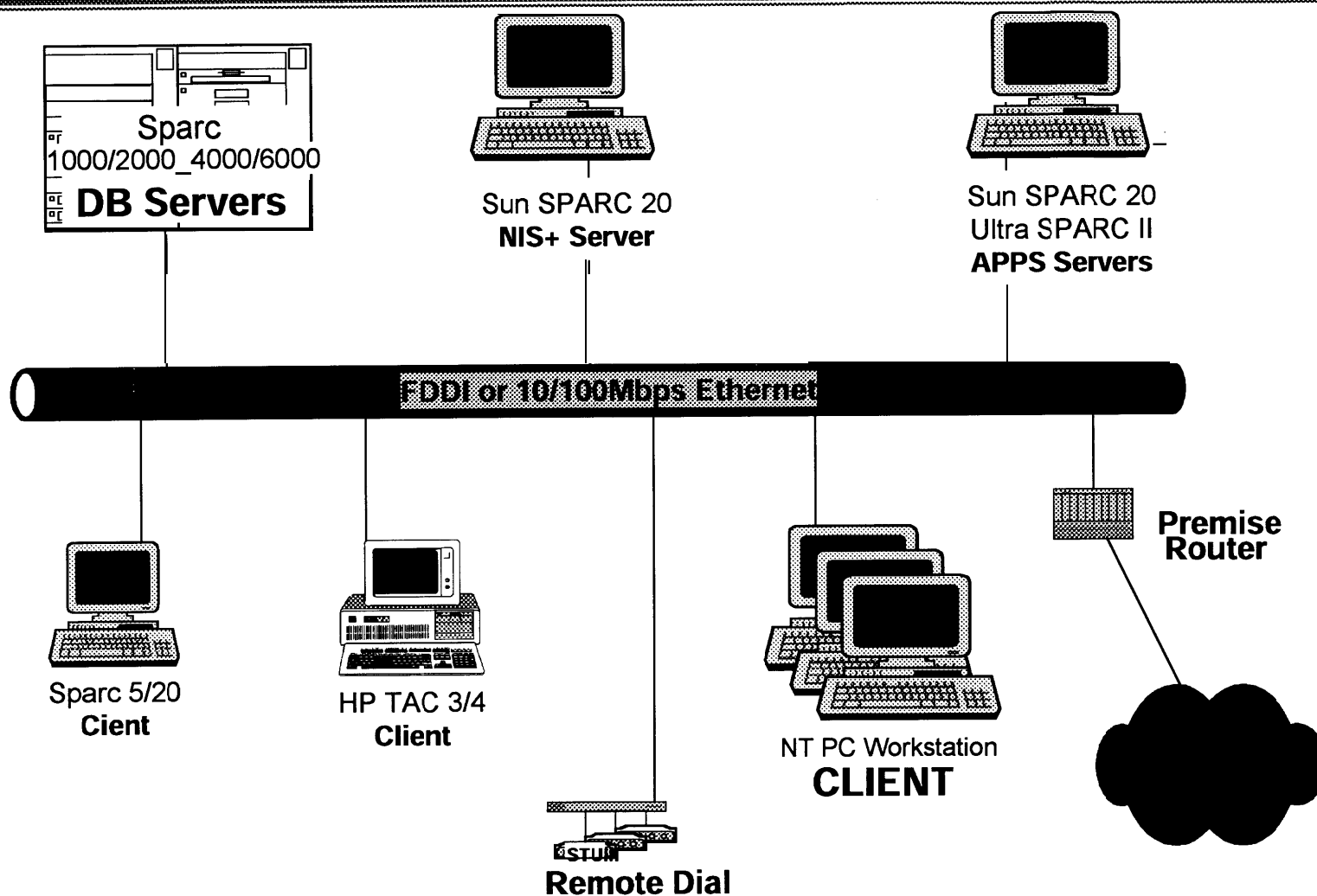—IMAGERY SUPPORT/INTELLIGENCE DATABASE

—THEATER BALLISTIC MISSILE DEFENSE

DII Bringing Enterprieses Together

Software Applications

- DII Operating System/Kernel
- DII Infrastructure/Common Support
- Database Applications
- Message Handling
- JOPES Applications
- GSORTS
- JMAS

- COP
- TBMWD
- Intelligence Applications
- Systems Support
- Security
- Office Automation
- Service/Site Applications

DII Bringing Enterprieses Together

Sparc
1000/2000_4000/6000
DB Servers

Sun SPARC 20
NIS+ Server

Sun SPARC 20
Ultra SPARC II
APPS Servers

FDDI or 10/100Mbps Ethernet

Sparc 5/20
Cient

HP TAC 3/4
Client

NT PC Workstation
CLIENT

**Premise
Router**

STU
Remote Dial

DII Bringing Enterprieses Together

Software Technology

- **GCCS following Commercial Industry**
  - Hardware advances increase performance
  - Introducing thin client applications
  - COTS replacing proprietary & government software
  - Network enhancements (WANS, LANs being upgraded)
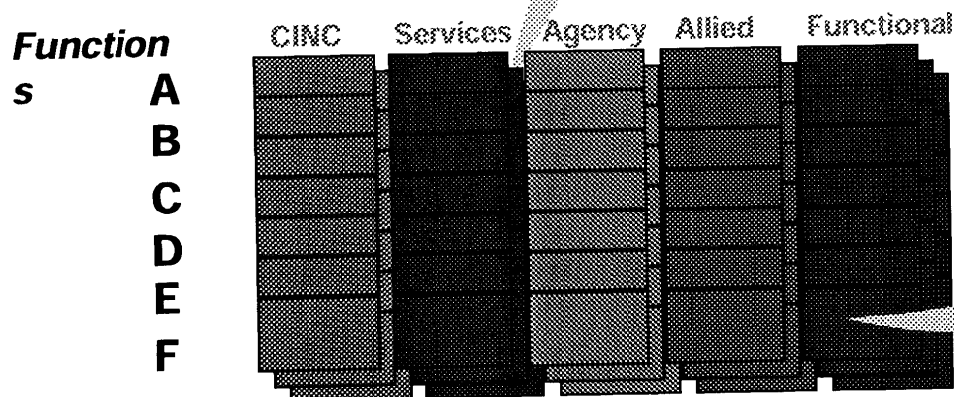- **Technology is changing the business process**

DII Bringing Enterprieses Together

Functionality Migrates to GCCS with DII COE

Fewer systems-All sharing DII COE compliant applications

Migration Selection

Today's Picture

Functions

	CINC	Services	Agency	Allied	Functional
A					
B					
C					
D					
E					
F					

Multiple Operating Environments

DII COE Migration System

Functions

	CINC	Services	Agency	Allied	Functional
A					
B					
C					
D					
E	DII COE				
F					
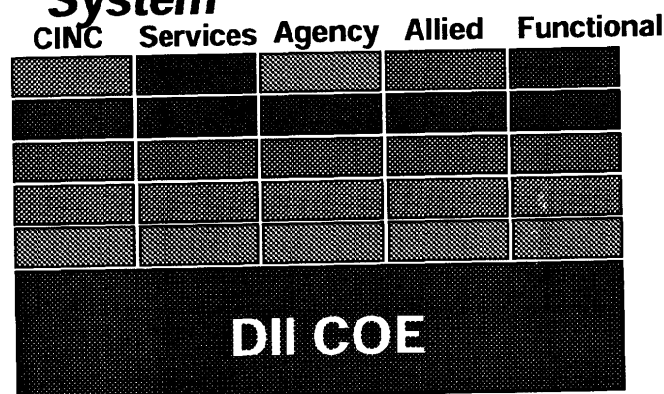
Mission Applications using one DII Common Operating Environment

Many Separate, Redundant Systems

DII Bringing Enterprieses Together

- Periodically refresh "underpinnings" via COE releases

- Rapidly develop and electronically deploy applications

- Reduce sustainment and training tail
  - Centralize system administration
  - Consolidate data bases
  - "Single-up" on platforms
  - On-line training